## REMARKS

The Examiner is thanked for the very detailed and professional office action. Pursuant to that office action, claims 1 and 2 have been rewritten to more definitely set forth the invention and obviate the rejections. Support for the amendments of claims 1 and 2 can be found in the Specification on page 27, lines 10-23. The present amendment is deemed not to introduce new matter. Claims 1 and 2 are the only remaining pending claims.

With respect to the examiners claim interpretation in paragraphs 2-4, on pages 2 and 3 of the office action, the examiner appears to conclude that claims 1 and 2 are product by process claims. It is respectfully urged that nothing could be farther form the truth. Both claims 1 and 2 call for a method of after treating an eye lens. No product is claimed in either claims 1 and 2. Therefore, the examiners reliance on In re Thorpe is misplaced.

Reconsideration is respectfully requested of the rejection of Claim 1 under 35 U.S.C. 103 (a), as being unpatentable over Bowers, et al. in view of Matsuda, et al.

In the rejection, the examiner admits that the examiner's principal reference of Bowers does not teach that the claimed method is carried out in an organic solvent.

To cure the deficiencies of the examiner's primary reference of Bowers et al, the examiner then relies upon the secondary reference of Matsuda et al to show that it would be obvious to react the phosphorylcholine in an organic solvent.

It is respectfully submitted that the examiners substitution of an organic solvent for the aqueous solvent used in Bowers et al is entirely unobvious for a number of reasons. First, in

example 5, described in column 17 of the Bowers et al patent, contact lenses were treated with 2-[(2-(1-imidazolecarbonyloxyethoxy) hydroxyphosphinyl)oxy]-N,N,N-trimethylethanaminium hydroxide, inner salt. It is respectfully urged that one of ordinary skill in the art would hesitate and not find it obvious to use an organic solvent in place of the aqueous solvent of Bowers et al, because the phosphinyl containing compound has a terminally substituted hydroxide-group which may very well react with an organic solvent. Second, the importance of using an aqueous solvent is emphasized in the Bowers et al reference because example 5 therein employs an aqueous solvent as well as all of the claims which require the use of an aqueous solvent.

Bowers et al describe a reduction in protein adsorption by chemically bonding a low molecular weight phosphorylcholine carboxyl compound onto the contact lens surface. Formula (V) in column 9, and SCHEME 6 in column 12, in Bowers et al. describe a chemical formula of a phosphorylcholine carboxyl derivative that has been turned into an active ester. However, no description of the synthesis method or Example is given and, therefore, this experiment cannot be reproduced. Therefore, Bowers et al cannot be called a disclosure of the present invention. Moreover, if a phosphorylcholine carboxyl derivative having the structure described, were to be synthesized based on ordinary organic chemistry commonsense, the method would be very cumbersome and the yield would be low, indicating very little practical use.

Example 5 in the column17 describes a method of introducing phosphorylcholine groups onto the surface of a contact lens composed of a 4-hydroxyethyl methacrylate copolymer by treating glycerophosphorylcholine with 1,1'-carbonyldiimidazole. However, the described target phosphorylcholine-treated contact lens could not be obtained as a result of an attempt to duplicate

the Example 5 described above. Therefore, the data showing a 96% reduction in protein deposition of the Example 5 cannot be trusted to one of an ordinary skill in the art of organic synthesis. Therefore, the primary reference of Bowers, et al. is not reliable, and should not be cited as the primary reference to reject the present invention.

During the course of prosecution of the parent application and this application, applicant has stressed the importance of the test results in Fig. 1 which demonstrates unexpectedly low protein adsorption by contact lenses treated according to the presently claimed method, versus contact lenses treated according to conventional methods. In response, the examiner has implied that the "BCA method" is not described in the specification, and that it is unclear what the Y-axes means in Fig. 1. (see paragraphs 24 and 25 in the office action.)

Consequently, the undersigned, in an effort to resolve this issue, turned to google on the internet, and typed in "BCA procedure for protein assay". The result of the google search is enclosed hereto attachment 1. Also, enclosed is attachment 2 describing the BCA protein assay. Attachment 2 originated from "experimental biosciences" Introductory Laboratory- Bios 211, Rice University, updated May 05.

It is clear from attachments 1 and 2 that the BCA protein assay referred to in the specification herein is considered to be a world famous protein assay and the "gold standard" in the art for protein assays. For these reasons, it is respectfully urged that one of ordinary skill in this art would understand the meaning of the BCA protein assay, especially since it is the "gold standard" for protein assays in this art. It is therefore respectfully submitted that one of ordinary skill in the art would understand the test results depicted in Fig. 1 herein. It is also respectfully submitted, that

the experimental test results in Fig. 1 are explained in sufficient detail to enable one of ordinary skill in the art to determine their significant.

Moreover, as explained in detail on page 26 of the specification, the "protein level in the solution portion was quantified with the BCA method", and the "protein adsorption level was determined as the reduction in the proteins in the solution portion". It is therefore clear to one skilled in the art would understand that the Y-axes in Fig. 1 denotes adsorbed protein in mg in the contact lenses.

Importantly, the experiment disclosed in the instant Specification was conducted in a protein solution of much higher concentration than in Bowers, et al. (mg order vs. μg order, respectively). Therefore, it is believed that the test conditions presented herein are much more rigorous than those described in Bowers, et al. Further, in view of the fact that the y-axis denotes adsorbed protein in mg, the contact lens of Example 1, as illustrated in Figure 1, adsorbed only 0.05 mg of protein, which is a 97% reduction in protein adsorption versus the untreated commercial product described in comparative example 3 (product name: 1-day Acuvue® from Johnson & Johnson, which absorbed 1.8 mg of protein). Clearly, this is an impressive reduction in protein adsorption, which is achieved via a carboxymethyl phosphorylcholine synthesized according to a more highly efficient and cost effective process than is conventionally known and utilized.

Further, contrary to the Examiner's assertions, it is respectfully submitted that the test results shown in Figure 1, clearly show the unexpectedly low amount of protein adsorption by contact lenses manufactured according to the presently claimed method (Examples 1 and 2), versus

contact lenses treated according to conventional methods (Comparative Examples 1-7).

Although Bowers, et al. in Example 5, purports to achieve a 96% reduction in protein adsorption compared to an untreated lens, the present inventors attempted to replicate such a contact lens, but following the production steps outlined by Bowers, et al., such a contact lens was not producible. Accordingly, it is believed that Example 5 of Bowers, et al., relied upon by the Examiner, is inoperable, and the examiner's reliance on Bowers et al is unwarranted.

Applicants respectfully submit that the test results in this case, if given the proper weight, clearly refute any prima facia case of obviousness presented by the examiner based on the prior art of record.

Reconsideration is respectfully requested of the rejection of Claim 2 under 35 U.S.C. 103(a) as being unpatentable over Bowers, et al. in view of Matsuda, et al., and further in view of Valint, Jr., et al.

The deficiencies of Bowers and Matsuda, et al. are discussed above.

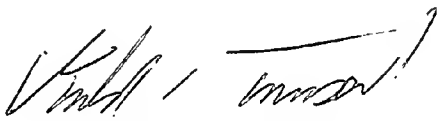
To cure the deficiencies of the examiner's primary and secondary references, the examiner relies upon Valint, Jr., et al. which is concerned with surface treatment of a silicone hydrogel contact lens. However, Valint, Jr., et al. neither discloses an after-treatment of a contact lens material with the phosphorylcholine group-containing chemical compound as required by amended Claim 2 herein, nor discloses or suggests the synthesis method of the carboxymethyl phosphorylcholine now called for in amended claim 2.

Accordingly, Valint, et al. fails to cure the deficiencies of Bowers, et al. and Matsuda, et al. It is therefore believed that the cited combination of references fails to render unpatentably obvious

the method presently called for in amended claim 2. Consequently, it is urged that the Examiner would be justified in no longer maintaining the rejection. Withdrawal of the rejection is accordingly respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is now in condition for allowance, and early action and allowance thereof is accordingly respectfully requested. In the event there is any reason why the application cannot be allowed at the present time, it is respectfully requested that the Examiner contact the undersigned at the number listed below to resolve any problems.

Respectfully submitted,



Donald E. Townsend
Reg. No. 22,069

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**CUSTOMER NO. 27955**

TOWNSEND & BANTA
Suite 900, South Building
601 Pennsylvania Ave., N.W.
Washington, D.C. 20004
(202) 220-3124